The European Proceedings of
Social and Behavioural Sciences
EpSBS

www.europeanproceedings.com
e-ISSN: 2357-1330

DOI: 10.15405/epsbs.2020.10.05.151

SCTMG 2020

International Scientific Conference «Social and Cultural Transformations in the Context of Modern Globalism»

DEVELOPMENT OF REFLEXIVE SKILLS IN STUDENTS – FUTURE TEACHERS

Tatiana Fedorovna Usheva (a)*, Tatyana Aleksandrovna Zhdanko (b), Alfiya Gamirovna Schumovskaya (c)
*Corresponding author

(a) Pedagogical Institute of Irkutsk State University, 6, Nizhnyaya Naberezhnaya St., Irkutsk, 664011, Russia
itf76@mail.ru,
(b) Irkutsk National Research Technical University, 83, Lermontov St., Irkutsk, 6640074, Russia
tatiana-zhdanko@mail.ru,
(c) Pedagogical Institute of Irkutsk State University, 1, Karl Marx Str., Irkutsk, 664003, Russia
alenkiy27@mail.ru

Abstract

The paper considers the problem of developing reflexive skills of students – future teachers. Reflection is an important quality of a teacher necessary for effective professional activity, so it is necessary to develop reflexive skills at the stage of professional training. The authors suggest developing these skills through educational programs, as well as by creating the following pedagogical conditions: educational activities within individual educational program, educational dialogue in the course of training, subject-subject relations through educational interaction; training in the analysis of pedagogical activities from different positions. Reflexive skills are considered as a necessary and meaningful quality of a teacher, which is demonstrated through the ability to analyze and adequately perceive oneself, to determine and analyze the reasons of your behavior, as well as its performance parameters and mistakes, to understand your qualities in the present in comparison with the past and to forecast the prospects for further development, to understand the reasons for actions of another person in the process of interaction, to analyze experienced situations and to consider the actions of others within your behavioral strategies. The presented curricula reveal the content for the development of reflexive skills: theoretical bases of reflection, general method of reflection in educational activity, attitude to reflection as a method of interaction in educational and quasi-professional activity. The paper describes the results of diagnostics of students' reflexive skills of experimental and control groups. The experimental and control groups were compared using the Spearman correlation analysis.

Keywords: Teacher, student, reflection, skills, design, program.

https://doi.org/10.15405/epsbs.2020.10.05.151
Corresponding Author: Tatiana Fedorovna Usheva
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

Active innovative processes in social, political and economic spheres led to a critical reassessment of established theoretical and practical foundations of pedagogical activity, a revision of traditional approaches to the training of future teachers.

One of the leading goals of modern pedagogical education is to develop the desire and ability of a future teacher for lifelong learning by systematically enriching professional knowledge and skills acquired during education at a higher educational institution. Learning as a need for self-improvement is fundamental in the profession of a teacher. The teacher should be able to refer to himself, to his inner world, to understand the motives of his own actions. The process of self-knowledge and self-reflection as a subject of pedagogical activity is only possible if a teacher develops his/her reflexive skills.

In modern psycho-pedagogical science, the problem of reflection as a process of self-knowledge of internal mental acts and states is one of the relevant and therefore requires deep understanding and development. Numerous studies proved the need for reflection, modern studies are devoted to the understanding of its internal nature, structure, development opportunities (Berinskaya et al., 2019).

Reflexive skills are characterized by a huge potential for development, self-realization and self-actualization of a personality of a future teacher. This is consistent with the implementation of the "principle of the humanhood of education" (Khutorskoy, 2012), according to which "it is the person who is the main subject of his/her education" and "the meaning of education is to identify and fulfill the inner potential of a person in relation to himself and the external world".

Reflexive skills are understood as the mastered techniques of corresponding activities on the basis of knowledge on the essence, means and techniques of its implementation (Slobodchikov & Isaev, 2013).

We suggest developing these skills through the study of a variable part of the Federal State Educational Standard of Higher Education (original courses *Reflection of Self-Organization and Self-Development in Professional Activity* and *Design of Professional Self-Development Based on Reflexive approach*), use of opportunities of additional and remote education (original courses *Self-Management: Career Planning* and a remote course *Managing a Personal Career or how to Become a Leader*), as well as reflexive methods (dialogue and metadisciplinarity) and forms (reflexive seminars, discussions, analytical workshops, round tables, Balint groups, etc.) (Meierdirk, 2017; Mkrtchyan, 2010; Shkerina, 2015; Verbitsky, 1991).

2. Problem Statement

The problem of our comprehensive study was to determine ways of developing reflexive skills of students – future teachers through scientific collaboration and based the use of reflexive methods.

3. Research Questions

Theoretical analysis of the problem under study made it possible to put forward the following hypothesis. Reflexive activity connected with the process of self-knowledge of internal mental acts and states by a subject serves the main component of training students of a pedagogical university. Its

https://doi.org/10.15405/epsbs.2020.10.05.151
Corresponding Author: Tatiana Fedorovna Usheva
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

formation in the educational process of the university implies the development of a set of reflexive skills. This is possible if:

- reflection of a future teacher is considered as a professionally important quality ensuring his/her self-development;
- collective training sessions ensuring a dialogue and subject nature of interaction between a teacher and students and imply the active position of a student, as well as his/her independence in the training activities serves a key method of training sessions on the formation of students' reflexive skills at the university;
- procedural model ensuring the purposeful formation of reflexive skills is developed and applied in the educational activity of the university;
- pedagogical conditions involving the dialogue and the subject nature of interaction, analysis and design of the students' educational action in the course of education are created;
- software-methodical materials on the creation of pedagogical conditions for the formation of students' reflexive skills are developed and introduced into the educational process of the university.

In accordance with the purpose and general hypothesis of the study, the following objectives were set:

1. To analyze the main theoretical approaches to the problem of reflection as a professionally important quality of a teacher and its formation in the process of teaching in modern psycho-pedagogical literature.
2. To reveal ways and means of forming reflexive skills of students of the pedagogical university.
3. To identify, theoretically justify and implement pedagogical conditions for the formation of students' reflexive skills.
4. To define stages and methods of organization of experimental work on the formation of reflexive skills of students – future teachers.
5. To develop software and methodological support for educational classes on the formation of students' reflexive skills.
6. To introduce the developed model into the educational process of the pedagogical university and to carry out quantitative and qualitative analysis of the obtained results.

4. Purpose of the Study

The purpose of the study was to develop, provide theoretical justification and experimental verification of the set of pedagogical conditions for the formation of reflexive skills of students – future teachers in the educational process of the university.

Experimental research base: Pedagogical Institute of Irkutsk State University, 3 th-4th year bachelor students of Psycho-Pedagogical Education.

https://doi.org/10.15405/epsbs.2020.10.05.151
Corresponding Author: Tatiana Fedorovna Usheva
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

5. Research Methods

The assumption put forward that reflexive skills are formed in the process of training and their formation as a significant skill of a teacher takes place during the study at the university, made the data collected through experimental studies quite necessary to confirm theoretical results.

In achieving the objective of the study, a set of methods was used:

- theoretical: study and analysis of philosophical, philological, psychological, pedagogical literature, federal state educational standards of higher professional education, pedagogical modeling, generalization, comparison;
- empirical: observation, experiment, analysis of processes and products of activity, evaluation of performed works, testing, questionnaire, understanding;
- mathematical: registration of obtained data, qualitative analysis of quantitative parameters, methods of mathematical and statistical processing of experimental results, etc.

In order to implement the tasks of the complex study, the following methods were used: a questionnaire to identify the individual measure of reflexivity by Karpov (2003), a technique to determine the formedness of skills to understand yourself and others during communication (adapted version of the Q-methodology), a technique to study the reflexive analysis, a method to determine the cooperative reflection.

Methods of processing the results of the study: processing of obtained data for all methods was carried out in two stages. The initial processing of answer sheets was performed manually. The raw scores for each parameter were then put in tables compiled for experimental and control groups of students – future teachers, respectively. The table data formed six samples. Subsequent statistical processing of data was carried out using STATISTICA V.6.0 software and the correlation analysis of Spearman and Kolmogorov-Smirnov. Then, a comparative analysis of the groups was performed, and the validity of the differences between the samples was determined using the Mann-Whitney U-test.

6. Findings

The analysis of obtained data made it possible to establish the level of formation of students' reflexive skills (Zhdanko et al., 2019). The obtained data are shown in Table 1.

Table 01. Diagnostics of formation levels of students' reflexive skills at the initial stage of the study

Group / level	High		Medium		Low	
	Number of people	%	Number of people	%	Number of people	%
EG (62 ppl)	3	4.8	18	29	41	77.2
CG (58 ppl)	4	6.8	16	27.5	38	65.7

Notes: (χ^2=0.445, p=0.606; no differences)

At the initial stage of the study, the level of reflexive skills of students of the experimental and control groups was roughly equal and low (insufficient) in most cases.

The results obtained during the diagnostics indicate the need to develop the reflexive skills.

https://doi.org/10.15405/epsbs.2020.10.05.151
Corresponding Author: Tatiana Fedorovna Usheva
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

The inclusion of students into various activities during the implementation of educational programs *Reflection of Self-Organization and Self-Development in Professional Activity* and *Design of Professional Self-Development Based on Reflexive approach* revealed the dynamics of formation of reflexive skills at the beginning and end of the study, which is presented in Table 2.

Table 02. Comparative data of reflexive skills formation in EG and CG at the beginning and at the end of the study

Level / stage of the experiment	**EG – CG**
Beginning of the experiment	χ^2=1.572 p<0.456
End of the experiment	χ^2=76.488 p<0.000

There are no differences between the groups at the beginning of the study. However, at the end of the study the changes are quite obvious (0.1 % – level of significance, in italics).

There are no students in the EG with low (insufficient) level of reflexive skills. The indicators with high and medium level improved by 41.2 and 25 % respectively. In the CG the growth of indicators is significantly lower: the indicator at a high level changed by 16.2 %, indicators at the medium and low levels improved by 7.5 and 23.7 % respectively.

In the process of diagnosing the reflexive skills, the following was established (Zhdanko et al., 2019).

Table 03. Comparative results of experimental (E1) and control (C1) groups

Level of students' reflexive skills	**E1 (%)**		**C1 (%)**	
	Beginning of the experiment	**End of the experiment**	**Beginning of the experiment**	**End of the experiment**
Low	77,2%	0%	65.7%	42%
Medium	29%	54%	27.5%	35%
High	4.8%	46%	6.8%	23%

The diagnostics of reflexive competences required the comparison of external and internal observations for EG and CG separately (Zhdanko et al., 2019).

The comparison of the internal observation of students of experimental and control groups show that in the experimental group the ability to maintain a collective task required the most internal efforts. The students of this group faced the need to constantly organize the process of study in different consolidated groups and the most difficult for them was to perform the task set by the group. During the first year of study, many members of consolidated groups were distracted, asked questions or made comments thus interfering the work of other group members. Gradually from year to year students learnt to demonstrate the skills of asking relevant questions, skills of involving other members of the group in vigorous activity, skills of predicting the results of collective work.

At the end of the second year of study we recorded the development of internal cooperative reflection of students of the experimental group: ability to assume a position in the group, ability to hold a collective task, ability to connect the results to the purpose of the activity. In practice these skills of

https://doi.org/10.15405/epsbs.2020.10.05.151
Corresponding Author: Tatiana Fedorovna Usheva
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

students of the experimental group were evident already according to the results of the first year of study and differed from the results of the students in the control group.

The students of the experimental group demonstrated a progressive increase in their ability to hold a collective task due to the creation of pedagogical conditions from the first year and the use of various organizational forms of training. The leap in skills formation takes place after pedagogical practice, where the students were able to apply their skills in professional activity. If the skills are formed through educational activities, during the period of pedagogical practice they become stronger.

It is difficult to form responsibility for what is happening in the group. It was found that its formation only takes place on the basis of assuming the position, accepting and retaining the collective task. Therefore, we can only talk about the formation of the ability to bear responsibility once the two previous skills are formed.

According to the results of the experimental study, the students of the control group only reached the level of formation of the ability to bear responsibility, which the students of the experimental group had during the second year of study. In our opinion, the conditions of planning and design of joint activities and the analysis of actions from the position of a “teacher” and “metaposition” influenced the formation of responsibility among the students of the experimental group in the second and third stages of the study.

The differences in the levels of formation of students’ reflexive skills showed that the increase of the formation level is facilitated by pedagogical conditions specially created during experimental work.

7. Conclusion

Thus, the formation of reflexive skills of students – future teachers is ensured by specially developed educational programs on the formation of reflexive skills, which is confirmed by quantitative and qualitative indicators.

The implemented programs on the formation of reflexive skills of students – future teachers determined the successfulness of the following pedagogical conditions:

- educational activities within the individual educational program,
- training dialogue in the course of training,
- subject-subject relations through educational interaction.
- training in the analysis of pedagogical activities from different perspectives (teacher, student, metaposition).

At each stage of the experiment, pedagogical conditions made students take more active measures, have a higher level of autonomy, and expand the limits of responsibility. The individual educational programs of the students of the experimental group helped to plan and design a collaborative educational action. The organization of the educational dialogue enabled them to organize the educational dialogue with students and school children. The training in the analysis of activities gave opportunities to do so from different perspectives. The establishment of the subject-subject relations made it possible to be the subject of relations itself, as well as to create conditions for others to be in the subject position.

https://doi.org/10.15405/epsbs.2020.10.05.151
Corresponding Author: Tatiana Fedorovna Usheva
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Reflexive skills as a universal quality of a teacher contribute to rapid adaptation of a young specialist to school and readiness to implement various innovative processes.

References

Berinskaya, I. V., Gordina, O. V., Kibalnik, A. V., Fedosova, I. V., & Usheva, T. F. (2019). Reflective Approach in Training Counselors at University. *Opción, Año 35, Especial, 20*, 1124–1139.

Karpov, A. V. (2003). Reflexivity as a mental property and technique for its diagnosis. *Psychol. J., 24*(5), 45–57.

Khutorskoy, A. V. (2012). *Metadisciplinary content in next-generation standards.* https://elibrary.ru/download/elibrary_18027774_17109200.pdf

Meierdirk, C. (2017). Reflections of the student teacher. Charlotte Meierdirk. *Reflective Pract., 18*(1), 23–41.

Mkrtchyan, M. A. (2010). *Development of collective learning*. V.P. Astafiev KSPU.

Shkerina, L. V. (2015). *Methodology of identification and assessment of the level of formation of professional competences of students – future teachers of mathematics*. V.P. Astafiev KSPU.

Slobodchikov, V. I., & Isaev, E. I. (2013). Human psychology: introduction to the psychology of subjectivity. PSTSP Publ. house.

Verbitsky, A. A. (1991). *Active higher education: contextual approach*. Higher School.

Zhdanko, T. A., Shumovskaya, A. G., & Usheva, T. F. (2019). Creative competence and reflexive competence as required characteristics of a modern student. *European Proceedings of Socialand Behavioural Sciences, LVIII*, 1–2787. https://doi.org/10.15405/epsbs.2019.03.02.206